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## TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	10/672069-Conf. #4721
Filing Date	September 25, 2003
First Named Inventor	Tariq M. RANA
Art Unit	1635
Examiner Name	K. Chong
Attorney Docket Number	UMY-062

### ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
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<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
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<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	LAHIVE & COCKFIELD, LLP		
Signature			
Printed name	Debra J. Milasincic		
Date	February 24, 2006	Reg. No.	46,931

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Dated: February 24, 2006

Signature:

(Debra J. Milasincic)



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Dated: February 24, 2006      Signature: (Debra J. Milasincic)

Docket No.: UMY-062  
(PATENT)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Tariq M. Rana

Application No.: 10/672069

Confirmation No.: 4721

Filed: September 25, 2003

Art Unit: 1635

For: IN VIVO GENE SILENCING BY  
CHEMICALLY MODIFIED AND STABLE  
siRNA

Examiner: K. Chong

### INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

| 03/01/2006 AKELECHI 00000025 120080 10672069  
01 FC:1806 180.00 DA

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

Applicant has not submitted copies of each cited U.S. patent in accordance with 37 CFR 1.98(a)(2)(ii). Applicant submits herewith copies of non-patent references in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information



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Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

## FEE TRANSMITTAL For FY 2005

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	(\$)	180.00	Attorney Docket No.	UMY-062
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### Complete if Known

Application Number	10/672069-Conf. #4721
Filing Date	September 25, 2003
First Named Inventor	Tariq M. RANA
Examiner Name	K. Chong
Art Unit	1635

### METHOD OF PAYMENT (check all that apply)

Check    Credit Card    Money Order    None    Other (please identify): \_\_\_\_\_  
 Deposit Account   Deposit Account Number: 12-0080   Deposit Account Name: Lahive & Cockfield, LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

Charge fee(s) indicated below    Charge fee(s) indicated below, except for the filing fee  
 Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17    Credit any overpayments

### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

#### 2. EXCESS CLAIM FEES

##### Fee Description

Each claim over 20 (including Reissues)

Fee (\$)	Small Entity Fee (\$)
	50
	25
	200
	100
	360
	180

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims		Extra Claims		Fee (\$)	
				Fee Paid (\$)	
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Fee (\$)	Fee Paid (\$)

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/50	(round up to a whole number) x		=

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): 1806 Submission of an Information Disclosure Statement 180.00

SUBMITTED BY		Registration No. (Attorney/Agent)	Telephone
Signature			

Name (Print/Type)	Debra J. Milasincic	Date	February 24, 2006
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Dated: February 24, 2006

Signature: \_\_\_\_\_ (Debra J. Milasincic)

as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Deposit Account No. 12-0080 in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 12-0080, under Order No. UMY-062. A duplicate copy of this paper is enclosed.

Dated: February 24, 2006

DJM/JAM/mch

Respectfully submitted,

By \_\_\_\_\_  
Debra J. Milasincic  
Registration No.: 46,931  
LAHIVE & COCKFIELD, LLP  
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Attorney/Agent For Applicant



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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/672069-Conf. #4721
(Use as many sheets as necessary)				Filing Date	September 25, 2003
				First Named Inventor	Tariq M. RANA
				Art Unit	1635
				Examiner Name	K. Chong
Sheet	1	of	2	Attorney Docket Number	UMY-062

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
A1*	US-5,782,242	02-16-1999	Monia		
A2*	US-6,358,932	03-19-2002	Monia		
A3*	US-6,506,559	01-14-2003	Fire et al.		

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
					T <sup>6</sup>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
C1	Chiu, Y.L., et al., "RNAi in human cells: basic structural and functional features of small interfering RNA," <i>Mol. Cell</i> , Vol. 10:549-561 (2002)				
C2	Chiu, Ya-Lin et al, "siRNA function in RNAi: A chemical modification analysis," <i>RNA</i> , Vol. 9(9):1034-1048 (2003)				
C3	Cimino, G.D., et al., "Psoralens as photoactive probes of nucleic acid structure and function: organic chemistry, photochemistry, and biochemistry," <i>Annu. Rev. Biochem.</i> , Vol. 54:1151-1193 (1985)				
C4	Cummins, Lendell L., et al., "Characterization of fully 2'-modified oligoribonucleotide hetero- and homoduplex hybridization and nuclease sensitivity," <i>Nucleic Acids Research</i> , Vol. 23(11):2019-2024 (1995)				
C5	Elbashir, S.M., et al., "Duplexes of 21-nucleotide RNAs mediate RNA interferences in cultured mammalian cells," <i>Nature</i> , Vol. 411:494-498 (2001)				
C6	Elbashir, Sayda M., et al., "RNA interference is mediated by 21- and 22-nucleotide RNAs," <i>Genes &amp; Development</i> , Vol. 15:188-200 (2001)				
C7	Elbashir, S.M., et al., "Functional anatomy of siRNAs for mediating efficient RNAi in <i>Drosophila melanogaster</i> embryo lysate," <i>Embo. J.</i> , Vol. 20:6877-6888 (2001)				
C8	Hearst, J.E., et al., "The reaction of the psoralens with deoxyribonucleic acid," <i>Q. Rev. Biophys.</i> , Vol. 17:1-44 (1984)				
C9	Kanne, D., et al., "Psoralen-deoxyribonucleic acid photoreaction. Characterization of the monoaddition products from 8-methoxysoralen and 4,5'8-trimethylpsoralen," <i>Biochemistry</i> , Vol. 21:861-871 (1982)				
C10	Lipardi, C., et al., "RNAi as random degradative PCR: siRNA primers convert mRNA into dsRNAs that are degraded to generate new siRNAs," <i>Cell</i> , Vol. 107:297-307 (2001)				
C11	Lipson, S.E., et al., "Structure of M1 RNA as determined by psoralen cross-linking," <i>Biochemistry</i> , Vol. 27:570-575 (1988)				

Examiner Signature	Date Considered
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Substitute for form 1449A/B/PTO				<b>Complete If Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/672069-Conf. #4721
(Use as many sheets as necessary)				Filing Date	September 25, 2003
				First Named Inventor	Tariq M. RANA
				Art Unit	1635
				Examiner Name	K. Chong
Sheet	2	of	2	Attorney Docket Number	UMY-062

C12	Neenhold, H.R., et al., "Major groove opening at the HIV-1 Tat binding site of TAR RNA evidenced by a rhodium probe," <i>Biochemistry</i> , Vol. 34:6303-6309 (1995)
C13	Nykänen, A., et al., "ATP requirements and small interfering RNA structure in the RNA interference pathway," <i>Cell</i> , Vol. 107:309-321 (2001)
C14	Parrish, S., et al., "Functional anatomy of a dsRNA trigger: differential requirement for the two trigger strands in RNA interference," <i>Mol. Cell.</i> , Vol. 6:1077-1087 (2000)
C15	Pierce Chemical Company, Instructions, "NHS-Esters-Maleimide Crosslinkers," pp. 1-8 (2001)
C16	Schwarz, Dianne S. et al, "Evidence that siRNAs Function as Guides, Not Primers, in the <i>Drosophila</i> and Human RNAi Pathways," <i>Molecular Cell</i> , Vol. 10:537-548 (2002)
C17	Sijen, T., et al., "On the role of RNA amplification in dsRNA-triggered gene silencing," <i>Cell</i> , Vol. 107:465-476 (2001)
C18	Thompson, J.F., et al., "Structure of <i>E. coli</i> 16S RNA elucidated by psoralen crosslinking," <i>Cell</i> , Vol. 32:1355-1365 (1983)
C19	Turner, S., et al., "Identification of sites of 4'-(hydroxymethyl)-4,5',8-trimethoxylpsoralen cross-linking in the <i>Escherichia coli</i> 23S ribosomal ribonucleic acid," <i>Biochemistry</i> , Vol. 22:4159-4164 (1983)
C20	Weeks, K.M., et al., "RNA recognition by Tat-derived peptides: Interaction in the major groove?" <i>Cell</i> , Vol. 66:577-588 (1991)
C21	Weeks, K.M., et al., "Major Groove Accessibility of RNA," <i>Science</i> , Vol. 261:1574-1577 (1993)
C22	Luy, B., et al., "Measurement and application of 1H-19F dipolar couplings in the structure determination of 2'-fluorolabeled RNA," <i>J. Biomol. NMR</i> , Vol. 20:39-47 (2001)
C23	Luyten, I., et al., "Hybridization properties of base-modified oligonucleotides within the double and triple helix motif," <i>Eur. J. Med. Chem.</i> , Vol. 33:515-576 (1998)
C24	Majlessi, M., et al., "Advantages of 2'-O-methyl oligoribonucleotide probes for detecting RNA targets," <i>Nucleic Acids Res.</i> , Vol. 26:2224-2229 (1998)
C25	Saenger, W., ed, "Principles of Nucleic Acid Structure," New York, Springer-Verlag (1984)
C26	Stein, C.A., "Phosphorothioate antisense oligodeoxynucleotides: questions of specificity," <i>Trends Biotechnol.</i> , Vol. 14:147-149 (1996)
C27	Caplen, Natasha J., et al., "Specific inhibition of gene expression by small double-stranded RNAs in invertebrate and vertebrate systems," <i>PNAS</i> , Vol. 98(17):9742-9747 (2001)
C28	Tuschl, Thomas, et al., "Small Interfering RNAs: A Revolutionary Tools for the Analysis of Gene Function and Gene Therapy," <i>Molecular Interventions</i> , Vol. 2(3):158-167 (2002)
C29	Wianny, Florence, et al., "Specific interference with gene function by double-stranded RNA in early mouse development," <i>Nature Cell Biology</i> , Vol. 2:70-75 (2000)
C30	Burgess, Kevin, et al., "Photolytic Mass Laddering for Fast Characterization of Oligomers on Single Resin Beads," <i>J. Org. Chem.</i> , Vol. 62:5662-5663 (1997)
C31	Holmes, Christopher P., et al., "Strategies for Combinatorial Organic Synthesis: Solution and Polymer-Supported Synthesis of 4-Thiazolidinones and 4-Metathiazanones Derived from Amino Acids," <i>J. Org. Chem.</i> , Vol. 60:7328-7333 (1995)
C32	International Preliminary Examination Report Application No. PCT/US03/30480, dated June 15, 2005
C33	International Search Report Application No. PCT/US03/30480, dated January 5, 2005

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
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Application No. (if known): 10/672069

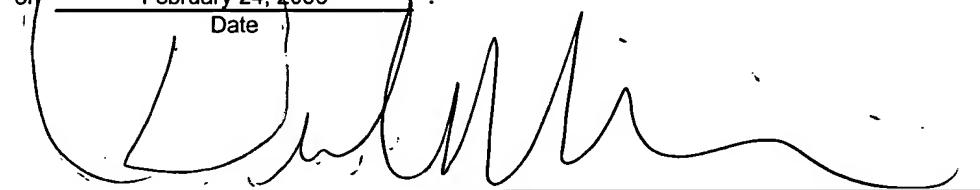
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Debra J. Milasincic

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46,931

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